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May 16, 2012

Mr. Theodore D. Schade
Air Pollution Control Officer
Great Basin Unified Air Pollution Control District
157 Short Street
Bishop, California 93514-3537

Dear Mr. Schade:

Subject: Los Angeles Department of Water and Power Comments on Great Basin
Unified Air Pollution Control District 2012 Ambient Air Monitoring Network Plan

On April 20, 2012, the Great Basin Unified Air Pollution Control District (GBUAPCD) released for public review and commentary its proposed "2012 Ambient Air Monitoring Network Plan" (2012 Network Plan). The 2012 Network Plan includes, as Appendix B, a proposed network plan for the National Core (NCORE) monitoring station located at the White Mountain Research Station east of Bishop, California.

The Los Angeles Department of Water and Power (LADWP) has reviewed the 2012 Network Plan and has a number of questions and concerns regarding the proposed network and monitoring approach, including the NCORE plan.

1. GBUAPCD Quality Assurance Project Plans.

LADWP is concerned that the GBUAPCD has been operating its PM₁₀ and PM_{2.5} network in the Owens Valley without U.S. Environmental Protection Agency (EPA)-approved Quality Assurance Project Plans (QAPP). 40 Code of Federal Regulations (CFR) 58 Appendix A requires, among other things, that "All monitoring organizations must develop a quality system that is described and approved in quality management plans (QMP) and quality assurance project plans (QAPP)..." (40 CFR 58 Appendix A, Section 2.1). On September 8, 2011, LADWP requested copies of the GBUAPCD PM₁₀ and PM_{2.5} QAPPs. The PM₁₀ and PM_{2.5} QAPPs were received from the GBUAPCD on September 22, 2011, and September 27, 2011, respectively. Both QAPPs were unsigned, designated as "drafts" (dated March 2001 and November 2002, respectively), and presumably never approved by the EPA.

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In later correspondence related to LADWP's appeal of the GBUAPCD 2011 Supplemental Control Requirement Determination (SCRD) to the California Air Resources Board (ARB),¹ attorneys for the GBUAPCD argued that the GBUAPCD and other districts have approved QAPPs under the ARB, and that ARB has obtained EPA's approval for the QAPPs. However, the ARB Quality Assurance Plan (QAP)² referenced in the GBUAPCD brief does not fulfill the quality assurance project plan requirements in 40 CFR 58 because it does not address all the unique instrument systems and processes that generate the data used to identify supplemental control areas on Owens Lake, nor does it address the GBUAPCD's monitoring organization, among others. Some of those missing system elements (e.g., sand motion monitoring, video monitoring) are described in the 2012 Network Plan's section on "Dust Identification Program" on page 11. To be clear, although the ARB QAPP does cover the State and Local Air Monitoring Stations (SLAMS) network that is the subject of the 2012 Network Plan, the ARB QAPP does not cover the *use* of those data to identify supplemental dust control areas on Owens Lake because it does not properly assure quality for all the instrument systems that are used in the dust source identification process described in the 2008 SIP.

LADWP requests that GBUAPCD update its PM₁₀ and PM_{2.5} QAPPs, encompassing all of the instrument systems that are required to implement the procedures described in the 2008 Owens Valley SIP, including the monitoring organization structure and functions, and to have them approved in a public proceeding in order to ensure that the data are being collected and analyzed in accordance with recognized quality assurance procedures.

LADWP also requests that GBUAPCD complete this work expeditiously, as the monitoring network is active and currently being used to identify emissive sources on Owens Lake and the Keeler Dunes, evaluate compliance within the Owens Valley Planning Area, and to assess the contributions from Owens Lake as far away as the Coso Junction Maintenance Area.

2. Overall Network Design.

The GBUAPCD's network of source impact monitors is focused almost entirely on Owens Lake. This is problematic because the current network does not adequately assess the contributions from other source areas that also affect air quality within the Owens Valley Planning Area, which is much larger than simply Owens Lake. Of the 18 monitors listed in the draft 2012 Network Plan, 11 are designated as "source impact" monitors, and all of these source impact monitors are located on or immediately around Owens Lake and the Keeler Dunes. Given the fact that high PM₁₀ concentrations originate from sources upwind and

¹ GBUAPCD's Opposition Brief Regarding the 2011 SCRD Appeal, State of California Air Resources Board, dated April 19, 2012.

² The ARB QAP was designed primarily as a guidance document for the operation of quality assurance programs used by the ARB, local air districts, and industry, whereas a QAPP is a more detailed plan that describes the quality assurance procedures for a particular project.

downwind of Owens Lake, the GBUAPCD should extend its network to encompass some of these source areas, which affect local communities as well as the overall attainment status of the Owens Valley Planning Area. LADWP has provided abundant evidence to GBUAPCD over the years that high PM₁₀ concentrations originate outside of Owens Lake. LADWP requests that GBUAPCD identify the major off-lake source areas (including the Olancho Dunes and the string of ancient dry riverbeds just north of Owens Lake along the eastern side of the valley) and monitor them for both sand motion and dust emissions. This information would have assisted the GBUAPCD in their recent assessment of the contribution of Owens Lake dust emissions at the Coso Junction PM₁₀ monitor, located 18 miles south of Owens Lake. The GBUAPCD's modeling analysis did not include any off-lake dust sources because the information required to characterize those sources is not being collected by GBUAPCD. If the GBUAPCD is truly interested in understanding the sources of dust that are affecting the Coso Junction monitor, then it should expand its source-impact monitoring network beyond Owens Lake.

The Owens Lake network described on page 10 of the 2012 Network Plan states that "*An additional monitor is located 20 miles south of the lake at Coso Junction.*" This begs the question of how a single monitor, located some 20 miles south of Owens Lake with large off-lake sources in between, can be considered part of the Owens Lake network. The GBUAPCD should either explain its reasoning more thoroughly or remove this statement from the 2012 Network Plan.

3. Comments on Individual Monitors.

Keeler PM₁₀ and PM_{2.5} Monitors

The Keeler PM_{2.5} and PM₁₀ monitors appear to violate the EPA siting criteria contained in 40 CFR 58 Appendix E.³ The Keeler monitors are located atop the GBUAPCD laboratory building near the center of town, and is surrounded by a network of unpaved streets and roadways that can be dusty under high winds with no traffic. The old State Highway leading south out of Keeler is especially emissive because the old asphalt is seriously degraded and sand covers many parts of the roadway. This old road continues to be used as a shortcut to Highway 136 and dust plumes generated by passing vehicles have been observed to cross the Keeler PM₁₀ monitor under southerly winds. Moving the monitor to the north edge of town would eliminate some of these local influences and provide a more representative sample of the air quality arriving from sources located outside of town. At a minimum, GBUAPCD should consider paving the road that runs along the east side of their laboratory facility (the west side is paved) because that road is still open and actively used.

³ 40 CFR Part 58, Appendix E, 3. Spacing From Minor Sources: "The plume from the local minor sources should not be allowed to inappropriately impact the air quality data collected at a site. Particulate matter sites should not be located in an unpaved area unless there is vegetative ground cover year round, so that the impact of wind blown dusts will be kept to a minimum."

North Beach PM₁₀ Monitor

The North Beach PM₁₀ monitor also appears to violate the EPA siting criteria contained in 40 CFR 58 Appendix E. The location of the North Beach monitor is especially problematic because it is located adjacent to two heavily used unpaved roads: a north-south gravel haul road leading to the Zone 1 shallow flood areas, and the (very dusty) east-west Boulder Creek Road used for local access. Several years ago before the North Beach monitor was installed, LADWP requested that the GBUAPCD place a TEOM along the shoreline north of Study Area 1, away from roads and at a point that the Dust ID model predicted relatively high 24-hour PM₁₀ concentrations from on-lake wind directions. LADWP did not agree with the North Beach site that the GBUAPCD eventually chose. LADWP recommends that this station be moved west to the site we originally proposed.

Flat Rock PM₁₀ Monitor

The 2012 Network Plan states that during April 2011, the PM₁₀ monitor at Flat Rock was shut down and moved northeast to the Mill Site (page 10, last paragraph). The 2012 Network Plan gives no reason why the Flat Rock station was discontinued, or why the Mill Site was chosen. It is important to know why these changes were made. Both LADWP and the GBUAPCD have evidence that the Flat Rock monitor was recording emissions from an off-lake source area located between it and the regulatory shoreline. That could have been the reason for the move. However, the Flat Rock dune area is just one of several off-lake source areas that are known to affect shoreline monitors under certain meteorological conditions. The GBUAPCD *should* be monitoring the emission contribution from known off-lake sources. The removal of the Flat Rock dunes monitor appears to be another example of the GBUAPCD's reluctance to acknowledge the contributions from off-lake dust sources.

Off-lake source areas also influence the new Mill Site. Screening for on-lake wind directions cannot remove the influences of off-lake sources.

Coso Junction PM₁₀ Monitor

EPA has noted that GBUAPCD determined that the Coso Junction monitoring site had been violating siting criteria since January 2010 (75 Federal Register 54031 (September 3, 2010)). LADWP requests documentation that the noted violations have been corrected. Additionally, LADWP cautions the GBUAPCD that the data from the Coso Junction PM₁₀ monitor cannot be used to assess the contributions from Owens Lake because: (1) the Dust ID model has very poor predictive capability, even at the relatively short plume transport distances across Owens Lake, (2) the Dust ID modeling protocol described in the 2008 SIP does not address the unique surface and meteorological conditions that prevail over the long transport distances between Owens Lake and the Coso Junction Maintenance Area (CJMA), and (3) the Dust ID model does not include any of

the several known off-lake source areas that influence downwind dust concentrations, and which are therefore critical for apportioning the PM₁₀ concentrations arriving at the Coso Junction monitor. Some but not all of these non-Owens Lake dust sources were documented in a letter to the EPA on March 15, 2012 (copied to the GBUAPCD).

At a minimum, LADWP recommends that GBUAPCD install another PM₁₀ monitor at the north end of the CJMA in order to assess the incoming PM₁₀ concentrations there.

4. Specific Comments on 2012 Network Plan.

Page 6, Table 1: The Special Purpose Monitors at T-8 and T-25 have been inactive since March 2010 and should be removed from this table.

Page 6, Table 1: The Special Purpose Monitors at T-4 and T-23 are currently being relocated on the Owens playa. It is our understanding that GBUAPCD has selected new locations for the monitors, and has solicited help from LADWP in moving them. GBUAPCD should include the new locations in this plan for public review and comment. Otherwise, the stations will be installed and collecting data before they have been formally reviewed and approved.

Page 6, Table 1: The Flat Rock TEOM was decommissioned in May 2011. As a result, the Flat Rock monitor should either be removed from the table, or the table revised to show that meteorological data only are collected at this site.

Page 6, Table 1: The 2012 Network Plan should remove all reference to the Simis Residence monitor. The Simis Residence PM₁₀ monitor was decommissioned in August 2008, and the meteorological monitoring was suspended in July 2011. No monitoring at this location is planned for 2012.

Page 8, "Core-Based Statistical Area": This phrase appears nowhere else in the document and should be removed from this list of definitions.

Page 8, "Micropolitan Statistical Area": This phrase appears nowhere else in the document and should be removed from this list of definitions.

Page 9, "Population Exposure": This phrase appears nowhere else in the document and should be removed from this list of definitions.

Page 9, "Representative Concentration": This phrase appears nowhere else in the document and should be removed from this list of definitions.

Page 9, "Trend Analysis": This phrase appears nowhere else in the document and should be removed from this list of definitions.

Page 9, "Site Comparison": This phrase appears nowhere else in the document and should be removed from this list of definitions.

Page 11, Dust Identification Program, lines 1-4: The text identifies special purpose monitors at T-4 and T-23 but doesn't mention that the monitoring stations are being moved, or where. It is LADWP's understanding that the GBUAPCD has selected new locations, and that the moves are underway now. If true, the GBUAPCD should be required to disclose this information in the 2012 Network Plan for public review and comment prior to acceptance of any data collected at the new locations.

Page 13, Mono Lake: This paragraph contains outdated information about the Simis Residence monitor, which was discontinued in August 2008. The out-of-date information should be removed from this paragraph.

Page 13, Mono Lake, lines 12-13: The statement "*This network is used to provide information on what portion(s) of the exposed shoreline are emissive and to what extent during a given storm*" is a gross overstatement. The system can only be used (and even then with a high degree of uncertainty) to identify emissive areas within the enclosed area of the 25 Sensits shown on the lower right side of Figure 5. The lineal extent of the Mono Lake shoreline within this Sensitive network is roughly only 4 percent of the total.

Page 14, 5.0 Recent or Proposed Modifications to Network, Owens Lake: This paragraph again mentions the inactive Special Purpose Monitors at T-8 and T-25. Both have been inactive for many years and therefore should be removed from the 2012 Network Plan. In addition, this paragraph mentions that the Special Purpose Monitors at T-4 and T-23 are being moved by "mid-2012," but doesn't mention where or why. Again, it is LADWP's understanding that the GBUAPCD has selected new locations and is moving the stations right now. If this is true, the GBUAPCD should be required to disclose this information in 2012 Network Plan for public review and comment prior to acceptance of any data collected at the new locations.

Page 16, 6.0 Minimum Monitoring Requirements, PM₁₀: The tabulated data in this section indicate that there are 12 active monitors in the Owens Lake non-attainment area. By LADWP's count, there are only 11 monitors proposed for 2012.

Page 23, NCORE Plan, Quality Assurance Status: This paragraph implies that the GBUAPCD has its own quality assurance plans when it states: "*The District's current Quality Assurance Project Plans...*" To our knowledge, the GBUAPCD does not have its own approved PM₁₀ QAPP and so that statement should be clarified. The EPA seems to believe that the GBUAPCD has its own independent QAPP because of the statements made in their 2008 technical systems audit of the California ARB air quality network:⁴

⁴ Technical Systems Audit of the California ARB, 2007, Conducted by the US EPA Region 9

- o "During the audit, EPA received a copy of GBUAPCD's most recent PM10 QAPP which will be reviewed for approval by Region 9."
- o "Finding GB1: Great Basin operates an independent monitoring, laboratory and QA program from that of ARB."
- o "Discussion GB1: GBUAPCD has independent QAPPs for its PM2.5 and PM10 monitoring programs and laboratory operations. The QAPPs incorporate SOPs written by the District. QA oversight by ARB consists of a flow audit once per year."

The 2012 Network Plan should clarify the nature and approval status of the District's PM₁₀ and PM_{2.5} QAPPs.

5. Conclusion.

LADWP believes that these concerns, unless properly addressed, greatly undermine the value of the GBUAPCD's monitoring network and the associated data collected. Therefore, LADWP requests that these issues be addressed prior to approval of the 2012 Network Plan.

If you have any questions, please contact me at (213) 367-1138, or Mr. Nelson Mejia of my staff at (213) 367-1043.

Sincerely,



William T. Van Wagoner
Manager of Owens Lake Regulatory
Issues and Future Planning

WTVW:rdn

c: Mr. Matthew Lakin, United States Environmental Protection Agency
Mr. Larry Biland, United States Environmental Protection Agency
Mr. Michael Flagg, United States Environmental Protection Agency
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